

THURSDAY, DECEMBER 23, 1875

LORD DERBY ON THE ENDOWMENT OF SCIENTIFIC RESEARCH

WE do not think it possible to estimate too highly the value of Lord Derby's address last Friday at Edinburgh, and his statements as to the rapidly widening fields of science and the increasing value of the results of scientific research. We shall simply content ourselves with quoting the very remarkable views he put forth as to the duty of the State with regard to the encouragement of research, views which, when we consider the character of the speaker and his official position, must be regarded as of the greatest significance. After speaking of the all-absorbing nature of scientific research, of the necessity of complete devotion to a special department in order to achieve success, and of the "world-wide benefit" of scientific results, Lord Derby said:—

"Science, above all, needs leisure, and I hope it is not utopian to look forward to the possibility of a far ampler provision being made for its prosecution by competent persons than exists at present. I do not refer merely or principally to help from the State; though, speaking for myself, I should not grudge it in such a cause. But the spirit of patriotism which animated founders of schools and colleges and public benefactors of former days is not extinct; in some directions it is more flourishing than ever. An American banker lately gave half a million to help the poor of London; a well-known Scotch gentleman has given the same sum within the last few years in aid of the Kirk of Scotland; money is never wanting at either end of this island when men see their way to make a good use of it. When have schools, hospitals, public parks, museums, institutes been more abundant than at the present day? Science has no endowments, or next to none; but only because the interest in that class of subjects is comparatively new, and rich men, who want to do some good with their capital, have not looked much in that direction as yet. Is it too sanguine a hope that we may see individual liberality take a form which hitherto it has rarely taken? Who knows how many discoveries might be worked out, how many conquests of man over nature secured, if for, I do not say a numerous body, but even for some 50 or 100 picked men, such modest provision were made that they might be set apart, free from other cares, for the double duty of advancing and of diffusing science? Who can measure what has already been lost to England and to the world, when intellects capable of the highest kind of original work have been wasted, not by choice, but by necessity, on the common drudgery of every-day life? I know very well that to some extent that must continue to be the case; it is visionary to contemplate a state of society in which every man will find exactly the employment that suits him; in human life, as in nature, there will always be a vast apparent waste of power. But we may at least reduce that waste where we see it going on; original capacity is not so common that we can afford to throw it away, nor so difficult to discover that we may excuse ourselves by saying we did not see it. I am quite aware that endowments of all sorts are discountenanced by a certain class of thinkers, of whom I speak with re-

spect, but who, I think, argue from the abuse of a thing against its use. The fact remains that the most enduring and valuable work done in the line of pure science will not bring a shilling to the man who does it; and while that is so (and one does not see how it can be otherwise), there seems nothing unreasonable in saying that society shall, in one way or another, make provision for those who are doing so much for society. Nor do I see that the risk of jobbing in such matters is great. Men who work to make money, or men who care for reputation of the popular sort, do not choose such pursuits as those of which I am speaking. And, making all allowance for the little jealousies and rivalries from which no profession is free, I believe that there is seldom any difficulty in picking out the best qualified candidates for professorships and appointments of that kind where there is an honest wish to find them. I go into no detail; I indicate no special plan. I had rather, for my own part, see action taken by the community than by the State, or, at least, I should wish to see the community largely helping the action of the State; but whatever is done, or whoever does it, I think that more liberal assistance in the prosecution of original scientific research is one of the recognised wants of our time. How far that assistance can be obtained by the utilisation of ancient endowments is a question partly of principle, partly of detail. I do not agree with the extreme views which have been put forward on either side in regard to it. I cannot follow the reasoning of those who say that the State has no right to divert endowments from one purpose to another. There must be a regulating power somewhere, else changes which, by common consent, lapse of time has made necessary could not be effected; and whether that power is vested in a Court of Justice or in a Commission, it is equally the power of the State. To my mind, so far as right is concerned, the Legislature may do what it chooses in regard to any endowment, without injustice, provided only that the rights of living individuals are respected. How far it is politic to use that power is another matter. Push its exercise too far, and you kill the bird that lays the golden eggs. Men give or leave funds, not for the promotion of useful public purposes in the abstract, but for some special form of public usefulness that has taken their fancy. You never hear of a fortune left to the Chancellor of the Exchequer to employ as he thinks best for the public service. One man cares for schools, another for hospitals, and so forth; and unless intending benefactors have a reasonable security that the general purpose for which they leave their money will be respected, the stream will soon dry up. More than that, I consider, they ought not to ask. Respect the founder's object, but use your own discretion as to the means; if you do not do the first, you will have no new endowments; if you neglect the last, those which you have will be of no use."

We need not add one word of our own in support of these views; the case on behalf of the endowment of research, which we have long advocated on the grounds stated by Lord Derby, could not be more forcibly put. It may, however, be useful to collect for reference the opinion of the country as expressed through the daily press.

The *Daily News* thus endorses Lord Derby's views:—

"The real advancement of science needs, as Lord Derby says, leisure, and the power and opportunity of purely disinterested study. In this sense all scientific men will agree with Lord Derby that science needs more help. We have, indeed, in England, some very illustrious living examples of men who not only teach, as a daily and laborious duty, the methods and results of scientific investigation, but who have themselves, in a precious and hard-earned leisure, carried that investigation far forward along paths hitherto untrodden. But it has occurred to every reader of their writings to ask what they might have added to the world's knowledge had they been able to devote their whole time and strength to their favourite pursuit. There is a growing conviction that investigation of this kind, as apart from teaching, ought to be encouraged by the State. Lord Derby would not grudge it help, even from national resources; but he throws out a suggestion which may be commended to the notice of men who, like the late member for Bridport, have money to leave, and are on the look-out for heirs. We have, as Lord Derby says, bequests of all kinds; and it would be a welcome sign that science had been made popular, even in a sense he would approve, if bequests of large sums to endow original research should come into fashion."

The *Daily Telegraph* says:—

"And here the speaker could not but touch on the question of the better endowment of scientific research, which he disposed of by heartily wishing that such benevolent people as give half a million to a charity, or to the Kirk of Scotland, would turn the stream of *Pactolus* upon the dry ground of natural science. There is no soil which would yield back more profitable harvests. A discovery in mechanics or physics benefits all mankind; and great investigations are undoubtedly kept in abeyance for want of the help which society does not, and the Government cannot, bestow. Lord Derby, indeed, expressed himself willing to advocate all that could be done in this direction by a Government; but his opinion is that the community must take up the question, if anything really large was to be hoped for, though something might, perhaps, be effected by the careful application of old endowments, upon which point the Lord Rector uttered some observations balanced so finely that a pinch of the dust of a 'dead founder' would turn his well-trimmed scales."

The *Globe* speaks as follows:—

"Valuable as were the hints suggested on what may be described as the conduct of intellectual life, still greater interest attaches to Lord Derby's observations on the subject of scientific research and University Reform. On the former topic scientific men have sometimes talked rather wildly of late, as if it were the duty of the State to provide an elaborate scheme for the endowment of science. Lord Derby did not accept this view; but he distinctly laid it down that the community has not yet realised the vastness of its obligations to science, and that, when it does so, much larger funds will be devoted to its encouragement than are now available. He also declared that, for his own part, he would not object to the State doing something to foster original research. These utterances will be eagerly fastened on by scientific men, but it may perhaps be questioned whether the difficulties in the way of definite action are not somewhat underrated. By what test would it be possible to select the men who should be supported for the purpose of extending the bounds of science? And if this difficulty were overcome, how could an assurance be given that the opportunities secured would be applied to the best advantage? Would it not be necessary to associate duties with the rights conferred on successful candidates? These and other obstacles may not be insuperable; but they will have to be thoroughly considered before a large additional expenditure is undertaken on behalf of science. Perhaps the best solution would be a generous endowment of scien-

tific professorships—by private liberality, if possible—in connection with which there would be teaching to some slight extent, but not so much as would interfere with work of a high kind."

According to the *Hour*—

"Perhaps that which will seem to English readers the most important part of Lord Derby's address is that relative to the importance of scientific research."

The *Scotsman* has the following:—

"Lord Derby does not know much about science, but he knows enough to have a clear view of the truth that 'science, in the strict sense of the word, can never be popular.' He also sees plainly enough that, as a consequence of this, science as a pursuit can never pay. Nothing in his address is more important or more just than his plea for the endowment of science, coupled as it is with an expression of his individual willingness that some aid should be given to science by the State. It is plain, too, that Lord Derby thinks that something might be got from our older endowments for this object, without doing injustice to anyone, living or dead."

The *Glasgow Herald* thus writes:—

"Scientific culture seems to command the largest share of Lord Derby's sympathies. Those who have the taste for the investigation of material objects 'have the satisfaction of knowing that while satisfying one of the deepest wants of their own nature, they are at the same time promoting, in the most effectual manner, the interests of mankind.' There is, in other words, the investigation of the unknown, and a service of utility rendered to mankind. Then, the charm of scientific studies to Lord Derby lies in their definiteness. The student is held down to the facts of nature; if he investigates them at all he must investigate them thoroughly. He knows nothing till he knows all that the facts reveal. Popular science is, to his mind, a misnomer. Science can never be popular, for its study involves leisure, careful industry, and patient waiting and watching. He is so convinced of the advantages of cultivating the study of nature that he would not be averse to a Government endowment."

It will thus be seen that public opinion, so far as we at present have been able to glean it, approves of the views expressed by Lord Derby; we cannot therefore doubt that Government will take an early opportunity of giving them practical effect.

AFRICAN HANDIWORK

Artes Africanae. By Dr. Georg Schweinfurth. With twenty-one lithographic plates. (London: Sampson Low and Co., 1875.)

THE title of this work may perhaps be thought too comprehensive, the author having, wisely as we think, confined himself to the arts of the negro tribes visited by him in the vicinity of the White Nile between the equator and about 12° north latitude.

Africa may be divided into three regions, corresponding to the movements of trade. In the northern half of the continent where Islamism and firearms have penetrated, home-made goods have been supplanted by European commodities and the last traces of native industry threaten shortly to disappear. An intermediate zone in which the cotton stuffs of Europe are made the chief articles of trade intervenes between this and the interior, where European goods are unknown and native arts are found in their most primitive condition. It is to a portion of this latter region that Dr. Schweinfurth's work relates.

The tribes of the White Nile were first visited by Consul Petherick in 1857-8, and many specimens of their arts which were brought home by him have since been